

SEGMENTED GLOBAL AREA DATABASE

ABSTRACT

Embodiments of the present invention relate to memory management methods and systems for object-oriented databases (OODB). In an embodiment, a database includes a plurality of memory-mapped file segments stored on at least one nonvolatile memory medium and not in main memory. An application program connects to the database. A fault handler associated with the database is registered with the operating system of the application program. The fault handler catches a segmentation fault that is issued for an object referenced by the application program and resident in the database. A file segment corresponding to the referenced object is found and mapped into main memory. The application program is restarted. Because data is transparently mapped into and out of the main memory without copying the data, objects may be read with near zero latency, and size restrictions on the database may be eliminated.